

Additional chart coverage may be found in CATP2, Catalog of Nautical Charts.

SECTOR 1 — CHART INFORMATION

SECTOR 1

HOKKAIDO—NORTH, EAST, AND SOUTH COASTS

Plan.—The coasts of Hokkaido are described in the following sequence—N coast., E coast., and S coast. The W coast of Hokkaido is described in Pub. 159, *Sailing Directions (Enroute) Japan*, Volume II.

The N coast of Hokkaido extends from Soya Misaki ESE to Shiretoko Misaki and includes the S shore of La Perouse Strait (Soya Kaikyo). The N shore of La Perouse is described in Pub. 155, *Sailing Directions (Enroute) East Coast of Russia*.

The E coast extends from Shiretoko Misaki, S to Nosappu Saki, the E extremity of Hokkaido. Suisho Shoto, a chain of small islands, extends NE from Nosappu Saki and is described with the E coast.

The S coast extends from Nosappu Saki, WSW to Esan Misaki. Off-lying islands are described with their adjacent coasts. The S coast of Hokkaido forms the N shore of Tsugaru Kaikyo, but a great part of this coast fronts on the Pacific Ocean.

General Remarks

1.1 Hokkaido, the farthest N of the main islands of Japan, has an area of 34,000 square miles. Hokkaido is mountainous and rises to a height of 2,290m near its center.

On the N, Hokkaido is separated from Sakhalin by La Perouse Strait; on the S, Tsugaru Kaikyo separates the island from Honshu. The Kuril Islands, which extend NE from the E coast of Hokkaido to Kamchatka, are described in Pub. 155, *Sailing Directions (Enroute) East Coast of Russia*.

The principal ports described in this sector are Abashiri, Mombetsu, Muroran, Tomakomai, Tokachi, and Kushiro. There are no harbors with port facilities on the islands E of Hokkaido.

This volume describes the coasts of Japan which border the Okhotsk Sea, the Pacific Ocean and the Philippine Sea and the island groups of Nampo Shoto and the Ryukyu Islands. Pub. 159, *Sailing Directions (Enroute) Japan*, Volume II describes the coast of Japan which borders the Sea of Japan, and includes Tsugaru Kaikyo and the Naikai.

The Japanese Coast Guard has instituted the Japanese Ship Reporting System (JASREP), effective October 1, 1985. The purpose and participation in this system is similar in intent and format to the AMVER system. Any vessel desiring to participate in both JASREP and AMVER may do so by sending notice of dual participation to the appropriate coastal station. The service area of the JASREP system is the area N of 17°N and W of 165°E. [For further information, see Pub. 120, *Sailing Directions \(Planning Guide\) Pacific Ocean and Southeast Asia*.](#)

Winds—Weather.—Hokkaido is located near the N boundary of the temperate zone and has a cold and humid climate with seasonal characteristics.

In winter, the region is dominated by the cold Northwest Monsoon which prevails from November to February and is responsible for the many days with strong winds and severe cold. Winter precipitation is mainly snow, which blankets

Hokkaido and the islands to the E, from January through February.

In spring, the Continental High weakens and violently shifting pressure patterns cause periodic weather. In March, the Northwest Monsoon gradually becomes intermittent, and low humidity anticyclones frequently pass through until May. The spring pressure often has a low in the N with resulting strong S winds. At times, a stationary high pressure system covers Hokkaido, bringing a succession of clear days with extremely dry air. In the spring, air temperatures gradually rise, and snow accumulations completely disappear by May. From March through June the season is relatively dry.

In summer, the Pacific High dominates the area and Hokkaido then comes under the influence of the warm Southeast Monsoon winds. On occasion in June, a high pressure system may cover the Okhotsk Sea producing a relatively mild, but cold and humid wind that brings temperatures down and periods of damp weather; when this high deteriorates the Southeast Monsoon revives. These monsoon winds are relatively weak and land and sea breezes predominate. In this period, humidity reaches maximum levels, sea fogs are prevalent, and heavy rains are frequent. Visibility is poor along the Pacific coasts from April through August during the frequent sea fogs. The summer rainy season extends from the beginning to the middle of July, however, in places the rainfall is greatest during September. July and August are the hottest months, but there are few days of extreme heat. The heavy rain season occurs from July through October.

In autumn, the Continental High begins to build up even while the Pacific High is dominant. Like spring, this too is a season of violent pressure pattern changes. There is relatively little danger from typhoons, although precautions must be taken when a typhoon approaches directly from the Sea of Japan or reaches Hokkaido, when there is a stationary front in the vicinity. Migratory anti-cyclones pass through, most frequently in October, giving that month the greatest number of clear days. The temperature drop in the fall is sharp and some localities record their first snowfall in October.

At Wakkanai, winds between the S and SE are common in spring and summer, and between the NW and NE in autumn and winter. Gales are frequent in winter and strong, local SW winds sometimes occur in summer.

Esashi has strong SW winds that in spring and autumn raise clouds of fine sand that interrupt communications with shore.

At Abashiri, NW winds are prevalent from January to March, SW in April and from September to December, and SE from May to August. North sea breezes blow on summer afternoons. The average wind speed is 7 knots from November to January and 4 knots in July and August. The record high velocity is 51 knots from NNW in December.

With local variations, W to N winds are prevalent during the colder season along most of the coast from Nemuro to Esan Misaki but at Esan Misaki, they begin earlier in the autumn and last until later in the spring. In the vicinity of Muroran Ko,

strong NW winds, which raise a sea, are frequent from mid-September until late March.

In summer, there is a greater frequency of S to E winds, with the highest development of S to SE directions at Nemuro. In early winter, the mean velocity, 11 knots, is the same at both of these extreme points. In summer, the lowest means are 6 knots in July at Esan Misaki and 7 knots in August at Nemuro. Esan Misaki has a maximum velocity of 47 knots, NNW in January, and Nemuro of 60 knots, NW, in February. In Nemuro Strait, W to NW winds are most frequent from September to April, often rising to gale force accompanied by snow from November to March. In May and June, squally SE winds are common, but in July and August light S winds and calms may be expected.

At Akkeshi, SE winds are most frequent in summer, N winds in autumn, and E winds in winter, while at nearby Hamanaka the summer winds are SW and those of winter are NW.

In wind speed, Kushiro has a low mean range from 8 knots in November to January, and 6 knots in July to September. The record high is 48 knots, NNE, in March. Urakawa has a high mean speed of 13 knots in December and a low mean of 5 knots in July. Its record high is 54 knots, W, in December.

The mean number of days with fog is highest, 100 days or more, along the E portion of the Pacific Ocean coast and the islands to the E. The means for other coastal regions are 20 to 60 days for the W portion of the Pacific Ocean, and 23 to 30 days for the Okhotsk Sea coast. These figures vary mainly according to the number of sea fog occurrences during the Southeast Monsoon season.

The sea fogs appear between April and October and blanket the E portion of the Pacific Ocean coast and the islands to the E with great frequency, so that from May through August there are over 10 days of fog each month; in July there may be as many as 20 days. Sea fogs that develop over the entire area tend to be extremely thick, although not uniformly so. They usually roll in to the coastal areas in the evening or early morning, but may on occasion persist for several successive days. In the W portion of the Pacific Ocean coast there may be more than 15 days with fog in July, and sieges of dense long-lasting fogs are not infrequent.

From April through June, sea fogs originating in the Okhotsk Sea and borne by NE winds may cover the Okhotsk Sea coast and the E portion of the Pacific Ocean coast. These are less dense than the Pacific Ocean variety and tend to dissipate during the day. They are extremely cold and wet fogs, so that even after the mist has dissipated the weather often remains dank.

The precipitation calendar in Hokkaido may be divided into the Northwest Monsoon precipitation period from November through February, the relatively dry season from March through June, and the heavy rain season from July through October.

The annual rainfall in Hokkaido is relatively light when compared with Honshu. Regionally, the W portion of the Pacific Ocean and Okhotsk Sea coasts collect about 1,000mm of rainfall per year and less than 800mm in places.

Along the E portion of the Pacific Ocean coast, winter is a relatively dry season, and the monthly average precipitation is generally below 550mm. The months of April and May are the

dry months along the Okhotsk Sea coast. The mean monthly precipitation in this period is from 38 to 76mm.

In July and August, all areas register from 106 to 165mm precipitation per month, with the higher measures recorded along the W portion of the Pacific Ocean coast.

September marks the beginning of the fall rainy season, when all areas receive the highest amount of rainfall for the entire year. Average monthly totals approximate 150mm, while over 200mm is recorded along the W portion of the Pacific Ocean coast, and some spots may receive as much as 260mm during the month of September.

Snow comes to all areas between late October and early November, but the real snow season is from late November to late March, when the Northwest Monsoon predominates. Precipitation during this period is almost exclusively snow; there may occasionally be some hail or sleet, but rarely any rain. Thus, the amount of snowfall and the amount of precipitation are the same. Snowfall is heaviest along the W portion of the Pacific Ocean coast and Okhotsk Sea coast, and the E portion of the Pacific Ocean coast coming last. During the snow season, snow falls on the average 20 days per month along the W Pacific Ocean and Okhotsk Sea coasts, and 15 days per month along the E portion of the Pacific Ocean coast.

Ice.—Ice fields are generally formed throughout the area N of Hokkaido and E of La Perouse Strait; they are most prevalent from January to early April. The use of icebreakers has been frequently reported in this area. The worst conditions apparently occur during late March and the first part of April, when the counterclockwise ocean current in the Okhotsk Sea and the N winds drive the ice down from the N, across the E entrance to La Perouse Strait.

The N and E coasts of Hokkaido are generally hemmed with fast ice and drift ice may be found off them. Fast ice may also fill the shores along the SE coast, but W of Erimo Misaki it is usually limited to thin ice forming in shallow areas along the inner shores of the bays. The drift ice brought to the SE side of the island by the Oyashio Current, also decreases in the region W of Erimo Misaki.

Tides—Currents.—In general the tides and currents on the N, E, and S coasts of Hokkaido are discussed with the coastal descriptions. Weather factors peculiar to certain bays frequently reduce actual water depths to considerably shallower depths than those indicated on navigation charts.

Information concerning the prediction of ocean currents in Japanese waters is announced weekly by radio fax as "Ocean Currents Forecast Charts." The service can also be received by telephone fax from the Japan Pilot Association.

The ocean current that flows into Hokkaido waters is the warm Tsushima Kairyu that flows in a N direction off the W coasts of Honshu and Hokkaido; branches of this current set E through Tsugaru Tsugaru Kaikyo and La Perouse Strait, and are known as the Tsugaru Danryu and the Soya Danryu. The warm currents are generally stronger in the summer and the cold currents are more vigorous in winter.

On the N side of Hokkaido the branch of Tsushima Kairyu flowing E from La Perouse Strait sets along the coast to the area N of Shiretoko Misaki, where one part turns toward the Okhotsk Sea region to the NE, and the other turns S into Kunashiro Suido and Numero Strait.

The Higashi Karafuto Kairyū, which flows S along the E coast of Sakhalin, is the most prominent segment of a current revolving in a counterclockwise direction inside the Okhotsk Sea. In winter, its drift is approximately 0.5 knot, and it reaches the waters off the N coast of Hokkaido. In spring and fall it has very little strength.

The summer months are the times of greater strength of the ocean currents off the N coast of Hokkaido. The drift of the current is about 1.5 knots in the spring and fall. In the summer, the drift may increase to 3 knots, but is virtually stagnant in winter.

In summer, the cold Oyashio sets S from the E side of the Kuril Islands and turns W off the SE coast of Hokkaido, reaching the area off Erimo Misaki. It then combines with the S-setting Isugaru Danryū, and the resultant flow is S. The velocity is generally less than 1 knot, but it may exceed 1 knot when very close to the coast. The area and velocity of the Oyashio are reported to be somewhat greater in the winter and spring than in summer.

A SW ocean current, with a velocity of 1.75 knots, is charted about 5 miles E and S of Erimo Saki.

Observations made on the W side of Erimo Saki indicate that in summer, at a distance about 3 miles off there is a SE ocean current in the area, about 25 miles long, between the cape and Urakawa Ko. This set, with a velocity of about 1.3 to 2 knots, becomes S in the vicinity of the cape. Local reports are that on rare occasions this current may reverse its direction.

That branch of the Tsushima Kairyū which flows E through Tsugaru Kaikyo, after clearing the strait, may set immediately S or may curve S after it arrives at a point some 40 miles SW of Erimo Saki. The former course is generally followed in winter; the latter is generally followed in summer. Current velocities range from 1 to 3 knots and are higher in winter than in summer.

Caution.—Fish havens, which may be on the sea bed, at intermediate mid-layer depths, or floating on the surface, are numerous in Japanese waters and are continually being augmented. Fish havens on the sea bed are usually composed of concrete block, scrap metal, discarded vehicles, or sunken hulks. Floating or mid-layer havens are often of a temporary nature. Concentrations of fishing vessels can be expected in their vicinity. Caution should be exercised as the placement of fish havens may well precede their inclusion in the Notice to Mariners.

Hokkaido—North Coast

1.2 The N coast of Hokkaido fronts the Sea of Okhotsk and extends from Soya Misaki, SE for 160 miles to Shiretoko Misaki.

From Soya Misaki to Notoro Misaki, the coast has a smooth regular shoreline. The only major projection is Notoro Misaki, the W entrance to Abashiri Wan. The only significant bay is Abashiri Wan, located between Notoro Misaki and Shiretoko Misaki.

There are virtually no detached islands or reefs along this coast and the offshore water depths are regular, with the exception of two large offshore banks which lie N of Notoro Misaki.

1.3 La Perouse Strait (Soya Kaikyo) (45°40'N., 142°00'E.) is a short, important passage which separates Hokkaido from Sakhalin and links the Japan Sea with the Sea of Okhotsk. This strait is 30 to 70m deep, and 23 miles wide, with a single lighted offshore danger charted 20 miles NNE of Soya Misaki.

Soya Misaki (45°31'N., 141°57'E.), a grass-covered cape 53m high, is the N extremity of Hokkaido; it rises about 2 miles inland to Maru Yama, a rounded hill with a height of 168m. Maru Yama can sometimes be seen when the cape itself is obscured by fog. The cape is fringed with rocky ledges and the bottom in the vicinity is uneven; there are no dangers seaward of the 20m line, which lies up to 2 miles offshore.

Caution.—On account of the dangers in the vicinity of Soya Misaki, and of the tidal currents in La Perouse Strait, Soya Misaki should at all times be passed at a distance of at least 5 miles.

1.4 From Soya Misaki, the coast trends in a SSE direction 36 miles to Kamui Misaki. The coast is almost a straight stretch of sandy beach, with a thick growth of bamboo grass behind it. The hills, covered with a dense forest of fir, recede inland, leaving lakes and swamps near the coast.

The 20m line lies from 1 to 3 miles offshore along this coast. Detached rocks and reefs are numerous. Todo Shima, two rocks, lie close offshore, 13 miles SSE of Soya Misaki. Hama-Onisibetu is a fishing village on the coast 0.9 mile SW of Todo Shima. A light is shown from a tower in Hama-Onisibetu, with an auxiliary light that illuminates Todo Shima.

Chiraibetsu is a small fishing port situated 3.5 miles WNW of Todo Shima. Sarufutsu, a village situated on the coast 6 miles SSE of Todo Shima, affords exposed anchorage to vessels loading lumber during the summer.

Hama-Tonbetu is a small fishing port at the mouth of Tom-betsu Kawa, situated 6 miles NW of Kamui Misaki. In summer, vessels load lumber in the open roads off the town.

Kamui Misaki (45°04'N., 142°30'E.), a rocky headland, is the most prominent landmark on the N coast. It rises steeply from the sea in two pointed summits; the E peak is 137m high and the W peak is 162m. A light shown from a cylindrical concrete structure, 18m high, situated on the headland.

Otoineppu is located 32 miles SSE of Kamui Misaki. The coastline is cliffy where the foothills of the highlands press against the seashore. There are rocky headlands between the low shore cliffs. Between Otoineppu and Mombetsu Ko, 25 miles farther SSE, the coast is mainly sand beach, with growths of bamboo grass and dwarf oaks; there are only a few small headlands along this entire stretch of coast.

Poronupuri Dake (Poronupuri Yama) (44°58'N., 142°24'E.) is a twin-peaked mountain, 839m high, that rises 7.25 miles SSW of Kamui Misaki. The mountain, which is quite conspicuous, is not visible from N; it is the last mountain in the area to lose snow in the spring. Hako Dake, 1,129m high, is the highest peak in the N section of the interior highlands. The mountain, which has a conspicuous white precipice on its N side, rises 18 miles S of Poronupuri Dake.

Along this stretch of coast dangerous reefs extend about 1 mile offshore. The reefs may be avoided by staying in depths of 20m or more.

1.5 Esashi Ko (Esasi Ko) (44°56'N., 142°35'E.), situated on the coast 8 miles SSE of Kamui Misaki, is a base port for the Okhotsk Sea fishery, and in September and October, during the mackerel-pike season, the port is crowded with fishing craft.

Aspect.—The following navigational marks may be of use when approaching Esashi Ko:

1. Three temples with green roofs, 0.35 mile SW of Esashi Misaki.
2. A radio tower, with an elevation of 25m, 183m WSW of Esashi Misaki.
3. Lights on the SE detached breakwater.

Anchorage.—Anchorage may be found, in 11m, mud, with the light on the E mole of the boat harbor bearing 322°, about 0.5 mile distant. This position is sheltered from all winds except from the W.

Omu Ko, a small fishing harbor 26 miles SSE of Esashi Ko, has a boat harbor opening to the SE. When the winds are offshore, temporary anchorage may be found in the area E of the boat harbor, in a depth of 10m, with the N breakwater light bearing 260°, 0.55 mile distant.

Caution.—A dangerous wind, known locally as the hikata, occurs in the vicinity of Omu Ko. This dry, strong, WSW wind, which comes up suddenly during clear weather, reaches forces of 35 knots and more. These storms are most frequent from March to May and are known to appear on occasion in the summer and autumn. Normal duration is about 6 hours, but the hikata have been known to blow continuously for 2 days. Storm effects are felt up to 12 miles offshore, and from 10 miles N of Omu Ko to Saruru, about 14 miles S.

1.6 Mombetsu Ko (Monbetu Ko) (44°21'N., 143°21'E.) (World Port Index No. 61110), is a fishing port, which is the second largest port on the Hokkaido N coast is situated 22 miles SSE of Omu Ko. There is an inner basin and an outer harbor protected by breakwaters.

The harbor is vulnerable to penetration by waves and swells when strong N and SE winds are blowing, and in rough weather it is dangerous to moor or anchor anywhere except in the inner port or boat harbor.

Depths—Limitations.—The 10m line extends to the breakwaters at the harbor entrance; within the breakwaters the general depths are less than 5.4m. The depths alongside the wharves range from 4 to 7.5m. The largest ship to dock at Wharf 1 E quay was a lumber carrier of 5,600 grt. The harbor tends to silt up, so deep-draft vessels need to be alert for changed depths.

Aspect.—The courthouse, a red brick building, is situated about 0.7 mile WNW of the North Breakwater Light. A parabolic radio antenna is situated 0.1 mile SE of the court house, and three radio masts stand 0.6 mile SW of the North Breakwater Light. A temple, with a conspicuous red triangular roof, is situated 130m S of the three radio masts.

Pilotage.—Pilotage is not compulsory; however, pilots are available with ample advance notice from Kushiro.

Anchorage.—Inside the breakwaters, the bottom is soft mud, poor holding ground. Outside the breakwater, anchorage may be taken, in 12m, sand, with the North Breakwater Light bearing 256°, 0.3 mile distant. Anchorages outside the break-

waters have good holding ground, but are unsuitable shelters in strong NW winds.

Caution.—Onne Se, with a least depth of 2.7m, lies at the outer end of an extensive reef ridge that extends 0.6 mile ENE from Benten Misaki, just N of Mombetsu Ko. A totally submerged sunken vessel lies about 0.3 mile NNE of the North Breakwater Light. There is an obstruction, comprised of concrete blocks, 0.2 mile E of the North Breakwater Light.

1.7 The coastline from Mombetsu Ko to **Notoro Misaki** (44°07'N., 144°15'E.) is 41 miles long. The W entrance point of Abashiri Wan, trends in a general ESE direction. The straight sandy coast is backed by a series of narrow hills about 10m high. In this stretch are the mouths of two streams and two lagoons, Saroma Ko and Notoro Ko. The sand dunes between Saroma Ko and the sea are thickly wooded with small trees. There are swamps and low-lying marshes, or wasteland, behind the sand beach on the W side of the lagoon. Further inland the terrain gradually rises toward the highlands of the interior.

The principal landmarks along this coast are, as follows:

1. Fumi Yama, 437m high, with a ridge resembling a horse's mane, located 12.5 miles SSE of Mombetsu Ko and a summit appearing when viewed from the E, but sharp when viewed from the N.
2. Naka Yama, a mountain 360m high, with a conical shape, rising 5 miles ESE of Fumi Yama.
3. Horoiwa Yama, with a flat wooded top and the most conspicuous landmark in the area, rising to a height of 376m close S of the S shore of Saroma Ko.
4. Iwakeshu Yama, a mountain 425m high, located 6.8 miles SE of Horoiwa Yama, and conspicuous from all sides.
5. Bushi Yama, 481m high, the highest peak in the vicinity and conspicuous when viewed from N and NE.

Along this stretch of coast the 10m curve lies, generally, between 0.5 and 1 mile offshore. There are no sunken dangers of less than 10m beyond 1 mile offshore.

Kitami-Yamatotai, a large elongated bank, lies off the coast near Notoro Misaki; it extends 42 miles N from a position 14 miles N of Notoro Misaki and has a least depth of 12.3m. The bank is about 3 to 6 miles wide from E to W.

Caution.—Between July and December, there are numerous fish traps within 1.5 miles of shore along this part of the coast.

Scallop beds, marked by red flags and red lights, may be encountered up to 5 miles off this coast.

1.8 Shimo Yubetsu (44°14'N., 143°37'E.), located on the coast 14 miles SE of Mombetsu Ko, provides open anchorage, either in a depth of about 12m, sand, 0.5 mile off the river mouth, or, in a depth of 15m, with a prominent watch tower in the town bearing 227°, distant about 1.3 miles.

Saroma Ko, the largest lagoon in Hokkaido, entrance is located 7.5 miles SE of Shimo Yubetsu. The entrance was originally dredged to a width of 100m and a depth of 5m, but in recent years it has silted up and become shallow. This entrance is marked by a light on the W side. Another light is displayed about 2 miles W.

Notoro Misaki, the W entrance point of Abashiri Wan, is a prominent headland marked by reddish cliffs, 42m high, located 21 miles ESE of the entrance to Saroma Ko. A seasonal

light, is shown from an octagonal concrete tower, 21m high, situated on the point.

From Notoro Misaki to Shiretoko Misaki (Siretoko Misaki), 49 miles ENE, the shoreline recedes to form Abashiri Wan (Abasiri Wan), a large deep bay.

From Notoro Misaki to Abashiri Ko (Abasiri Ko), 6 miles S, the coast consists largely of steep cliffs, which are backed by a hilly terrain 200m high. The 23-mile stretch E of Abashiri Ko consists of sandy beaches backed by sand dunes. The shore is backed by a thickly wooded plain lying at the foot of a volcano. From this position NE to Shiretoko Misaki, the almost straight shoreline consists of steep cliffs with a few sand and gravel beaches. The coastal terrain is high, rising abruptly to elevations of 300m or more and merging with the higher land in the interior.

The S shore of Abashiri Wan is backed by some conspicuous peaks and Shiretoko Hanto, which forms the E side of the bay, also rises to conspicuous peaks.

Mokoto Yama (43°42'N., 144°20'E.), 1,005m high, rises 24 miles S of Notoro Misaki; it is a conspicuous cone-shaped mountain. Shari Lake (Syari Lake), 17 miles ENE of Mokoto Yama, is a dark, steep-sided peak, standing apart from other mountains to the NE, that rises to a height of 1,545m. Unabetsu Lake, 1,419m high, is located 9 miles NE of Shari Lake, and Onnebetsu Lake rises to a height of 1,339m 9 miles farther NE.

Io Zan (44°08'N., 145°11'E.), on the peninsula E of Abashiri Wan, is a bare yellowish-colored mountain, with four peaks that rise to a height of 1,563m; the W peak is the highest of the four. Shiretoko Lake, 1,254m high, rises 7.5 miles NE of Io Zan.

Abashiri Ko (44°01'N., 144°17'E.)

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1.9 Abashiri Ko (Abasiri Ko), a harbor protected by breakwaters, is situated at the mouth of the Abashiri Gawa, 5.5 miles SSE of Notoro Misaki. This is a regulated port and a designated port of entry and local port. The port within the breakwaters is known as the Inner Port, and the area outside the breakwaters is known as the Outer Port. There is an outer detached S breakwater. A light is shown 0.2 mile SW from the elbow in the S breakwater. This is the largest port on the N coast and serves as the base for the Okhotsk Sea fishing fleet. There is heavy fishing boat traffic from September to November, which is the mackerel-pike season.

Winds—Weather.—The weather at this port is generally calm between May and October, but in strong E and S winds, swells may enter the Inner Port. Between November and the time the harbor freezes in December, the Northwest Monsoon winds frequently bring swells that spill over the breakwaters and make it impossible for vessels to remain at their berths. The port averages about 27 days of fog each year, with about 6 days each in June, July, and August. Fog is rare during October, November, December, and January.

Ice.—Shore ice begins to form in Abashiri Wan in late December and by early January, the entire coast is frozen up. Pack ice begins to appear in late December, and from early January until late March, all seaborne traffic in this region comes to a standstill.

The pack ice appears in different forms. Initially it consists of drifting floes made up of rubble ice, but by late January, tightly packed ice fields cover vast areas of the sea.

Numerous ice hillocks, some which rise as much as 1.5m above the surface, form on these ice fields.

Tides—Currents.—There is a large diurnal inequality at Abashiri Ko. Off the harbor the tidal current sets NW with the rising tide and SE on the falling tide. There is normally almost no wave activity inside the estuary, but about four or five times a year during the autumn and winter, swells spilling into the harbor cause a reverse flow in the river, making it difficult for vessels moored there to get underway.

Depths—Limitations.—The 10m line extends to the harbor entrance and there are depths up to 9.7m within the breakwaters. In the W half of the Inner Port the water has a depth of less than 8m. The principal mooring facilities have depths from 4 to 10m. Shoal depths of 6.3 and 5.2m lie about 0.2 mile SE and 0.2 mile SSE, respectively, from the Inner Port entrance.

There is a large reef ridge, covering an area 100m wide and with a minimum depth of 6.4m, lying between a point 0.2 mile E and 0.2 mile SSW of the East Breakwater Light. Another reef, located 0.2 mile E of the North Breakwater Light, has a depth of 8m. There are also shallows inside the North Breakwater; a reef, with a depth of 3.4m, lies 50m WSW of the North Breakwater Light.

Water depths in the estuary tend to be less than shown on the charts because of silting.

Aspect.—The radio tower, 1.8 miles S of Abashiri Ko entrance, provides a good landmark as do the courthouse and radio masts on the hill above the reddish-brown cliff, 0.4 mile SW of the East Breakwater Light. The radio tower 1 mile SW of the same breakwater light is an extremely conspicuous mark. Bairagi Saki (Futatsu Iwa), 1.3 miles NW of Abashiri, is a cliffy headland 44m high; a yellowish cylindrical rock, 46m high, located nearby, is conspicuous when viewed from the NE. Boshi Iwa (Watara Iwa), 23m high, a remarkable square rock, lies on a reef on the N side of the harbor; it is sometimes obscured by the terrain behind it.

Pilotage.—Pilotage is not compulsory, but pilot is available during daylight hours, with advance notice, from Kushiro. Entry into the port is allowed at all time.

Anchorage.—Anchorage can be obtained, in a depth of 15m, sand, with the North Breakwater Light bearing 265°, distant 0.3 mile, or in similar depths with the same light bearing 230°, distant 0.4 mile, but in the latter position swelling rebounding off the North Breakwater may cause the vessel to ride uneasily.

There is also anchorage, in a depth of about 8m, with the summit of Boshi Iwa bearing 129°, distant 0.3 mile, or bearing 154°, distant 0.4 mile, taking care to avoid fish traps which extend 110m N from the middle of West Breakwater from July to November.

The quarantine anchorage is established within a circle, with a 300m radius, centered 0.5 mile NE of the North Breakwater Light.

1.10 Shari Hakuchi (43°55'N., 144°40'E.) is a fishing port situated in the Shari Gawa estuary, 18 miles ESE of Abashiri Ko. Except for two training walls, one on each side of the river,

there are no port facilities. The constantly shifting sandbar across the mouth of the estuary makes access to the port difficult even for small craft.

From Shari Hakuchi the coast trends in a NE direction, 17 miles to Utoro.

Utoro is a small artificial fishing harbor enclosed by breakwaters. There are depths of 4m alongside the quay on its S shore.

Shiretoko Misaki (44°21'N., 145°20'E.), the NE extremity of Hokkaido, is also the NE entrance to Abashiri Wan. The cape is faced with a cliff, 19m high, and is ringed by sunken and above-water rocks, up to 0.5 mile offshore; a light is shown. Shiretoko Iwa is an isolated conspicuous rock, 6m high, located 183m N of the point. An extensive bank, with a least depth of 16m, extends from 2.5 to 10 miles NE of the cape; elsewhere in the vicinity, the 200m line lies up to 2 miles offshore.

An ocean current sets NNE over the bank NE of Shiretoko Misaki at rates up to 4.8 knots. Tide rips occur in the vicinity of the bank.

Hokkaido—East Coast

1.11 The E coast of Hokkaido extends from Shiretoko Misaki to Nosappu Saki, about 62 miles SSE. The N section of this coast is the E side of the Shiretoko Hanto and is relatively unindented. The terrain in the middle and S sections of this coast is generally low-lying country. Between Nokke Saki and Nemuro Hanto, 17 miles SE, is a large shallow bay known as Nemuro Wan.

Among the very few ports and harbors along this coast, only Nemuro Ko is capable of accommodating general shipping.

Nemuro Strait.—The E coast of Hokkaido, from Shiretoko Misaki to Nosappu Saki, 62 miles S, is fronted by Nemuro Strait; Ostrov Kunashir (Kunashira Shima) lies on the E side of the strait. The strait is 40 miles wide at its N end and 20 miles wide at the S end. The narrowest part, Notsuke Suido, is 8.5 miles wide.

In the N, the depths of Nemuro Strait are over 2,000m, but S of latitude 44°N the strait shoals rapidly and, in the area of Notsuke Suido, there are many shoals of less than 7.3m. No navigational aids mark the channel, and terrain on either side is low and featureless. It is difficult to negotiate this channel and the transit of deep-draft vessels is an especially dangerous undertaking. Since the shoals are constantly changing in size, location, and depth, it is dangerous to overly rely on the charts.

Whether or not a vessel can transit Nemuro Strait depends on pack ice conditions and its ability to negotiate Notsuke Suido.

Shallower depths than charted have been reported (1995) in Notsuke Suido.

1.12 Shiretoko Misaki to Rausu Hakuchi is a 20-mile stretch of coast with narrow gravel beaches and 100m cliffs that fringe the water. The terrain behind the shore rises abruptly to heights of over 1,000m, as it merges into the mountain range that forms the spine of the peninsula. These highlands are thickly wooded.

The coast is steep-to and the 200m line lies between 0.5 and 2 miles from shore.

Caution.—When a low pressure system passes N of Shiretoko Hanto, a violent W to NW wind, known locally as "dashikaze," blows down the mountain sides after a cold front passes.

The dashikaze, that is further intensified by a whirlwind phenomenon, causes the most damage during the months of April and May. The duration of the typical dashikaze is short.

The storm strikes with the strongest force on the downwind side of breaks in the ridge line of the peninsular mountain range. The most vulnerable places include the Sashirui Gawa and Rausu Gawa estuaries. This wind, at times accompanied by rain, sleet, and snow, has estimated velocities up to 88 knots. It has been concluded from past storms that the dashikaze has its maximum destructive effect on vessels located within 2 to 3 miles of the coast.

1.13 Rausu Hakuchi (Rausu Ko) (44°01'N., 145°12'E.), a fishing port, is the only usable port on the E side of Shiretoko Hanto. From late September to early December, the squid fishing season, the port is crowded with about 300 fishing boats that take up every bit of available space. There is about 370m of quays, with depths alongside up to 4m. Vessels may anchor, in 12.5m, good holding ground, with No. 2 South Breakwater Light bearing 270°, 0.11 mile distant.

The principal landmarks of Shiretoko Hanto have been described with the N coast of Hokkaido beginning in [paragraph 1.2](#).

The 35-mile stretch of coast between Rausu Hakuchi and Nokke Saki is practically all rock beaches.

Between Rausu Hakuchi and Uembetsu Gawa, 10 miles SSW, the E slopes of the mountain range that forms the spine of Shiretoko Hanto run down to the sea, forming an almost continuous line of cliffs rising from the water.

From Uembetsu Gawa, the coast trends in a SSE direction about 12 miles to Shibetsu. The terrain between these points consists of terraced plateaus covered with large trees. Sheer cliffs, 20m high, line the shore. From Shibetsu the coast trends 11 miles SE to Nokke Saki; the coast is backed by low marshland and wooded terrain.

The 200m line lies 1 mile off Rausu Hakuchi. The waters of Notsuke Suido became more shallow as the strait is approached.

Shibetsu Hakuchi (43°40'N., 145°08'E.), an open roadstead off Shibetsu, 22 miles S of Rausu Hakuchi, offers suitable temporary anchorage, except in N winds, for vessels southbound through Notsuke Suido.

Nokke Saki (43°34'N., 145°21'E.), the E point of a low spit extending 7 miles SE from the general coastline, forms the W shore of Notsuke Suido. The spit lies 11 miles SE of Shibetsu Hakuchi. Small vessels seeking shelter to Nosappu Saki from N winds anchor S of the spit in less than 5.4m.

Nokke Saki to Nosappu Saki 23 miles SE, the coast recedes to the S and forms a large shallow bay known as Nemuro Wan.

The shoreline of Nemuro Wan trends in a NW direction to the root of the sandspit, which terminates at Nokke Saki. Bekkai, located on the W shore of Nemuro Wan, lies 15 miles S of the root of the sandspit; then the coast trends SE about 11 miles to the village of Tobai. From Tobai, the thickly-wooded coast trends NE 5 miles to Nemuro Ko, then 5 miles farther NE to Nokkamappu Saki. Nosappu Saki, the E extremity of Hok-

kaido, lies 7 miles E of Nokkamappu Saki. This stretch of coast is thickly overgrown with bamboo and stunted trees; the points and low cliffs are all very dark in color.

Nemuro Ko (43°20'N., 145°35'E.)

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1.14 Nemuro Ko, in the SE part of Nemuro Wan, is the only natural harbor on the E coast of Hokkaido; it is designated as a port of entry and specified port. The Inner Harbor is enclosed by the N and S breakwaters, which extend N and S, respectively, from Benten Shima, an islet on the NW side of the harbor. A breakwater extends W from Benikemui Saki, a point of land on the NE side of Nemuro Ko. The Inner Harbor has a N and S entrance. General shipping uses the N entrance; only small vessels with drafts of 3 to 4m can use the S entrance.

Winds—Weather.—Sudden summer fogs are common here and are most frequent during July and August; however, May through August are the months with the greatest number of days with fog. The average number of days with fog for these months is 20 days each.

With strong N winds, a heavy sea and swell sets into the harbor, making entry dangerous and rendering the inner anchorage and dock area hazardous. At Nemuro Ko, a falling barometer with a backing wind predicts N winds.

Nemuro Ko is closed in winter during the freeze-up, and from January to April, drift ice may close the port and hinder navigation in Nemuro Wan. During these periods ships are diverted to Hanasaki Ko, on the S coast of Nemuro Hanto.

Tides—Currents.—In the outer harbor of Nemuro Ko, the tidal current flows toward the shore on the rising tide and away from the coast with the falling tide. These tidal currents combine with the E ocean current resulting in a NE or SE set.

Depths—Limitations.—Depths in the approach are less than 18.3m. with the 10m line extending to the breakwaters at the N entrance. In the N section of the inner harbor depths range from 6.4 to 7.6m, decreasing to less than 1.8m in the S part. The SW entrance, S of Benten Shima, has a depth of 2.1m; a mud flat fronts the SE shore of the inner harbor.

A vessel up to 2,000 grt can be accommodated. The largest ship to anchor in the inner port was a vessel of 1,150 grt and in the outer anchorage a vessel of 6,586 grt.

Aspect.—There is a parabolic radio antenna situated 0.7 mile SSE of the North Breakwater Light. There are five radio towers 0.9 mile ESE of the above antenna. There is a radio tower, with a height of 111m, situated on the E side of downtown Nemuro.

Anchorage.—Good anchorage may be found in the outer harbor, about 0.4 mile NW of Benten Shima, in 15m, sand bottom. It is best to use double anchors positioned for maximum holding against NE winds.

1.15 Nokkamappu Saki (43°23'N., 145°39'E.), located 4.5 miles NE of Nemuro Ko, is the NW extremity of Nemuro Hanto. Tosamporo Saki, the N extremity of Nemuro Hanto, is located 4.5 miles farther E; Nosappu Saki lies 2.5 miles farther ESE.

Kaigara Sendan (43°23'N., 145°52'E.), an extensive foul area of rocks and islets, lies about 1 mile E of Nosappu Saki. The sea usually breaks on these shoals, especially during the summer with SE winds. A light, shown from a cylindrical concrete structure, 19m high, is situated on an islet in the NW part of the shoal.

Goyomai Kaikyo (43°23'N., 145°50'E.), the passage between Nosappu Saki and Kaigara Sendan, has a fairway 0.5 mile wide between the 20m line; there is deep water in mid-channel. Inside the 18.3m line, there are scattered reefs.

To pass through this channel safely, navigators must exercise great care, as the low-lying terrain on either side offers few good landmarks. This is an important waterway joining the Pacific Ocean and Nemuro Strait.

Fog frequently blankets this area; dense fogs occur whenever there is a S wind, and visibility is reduced to almost zero. These fogs are most frequent between May and July. During June and September, hundreds of small boats are in the vicinity of Kaigara Shima to harvest kelp. In poor visibility, extreme care is needed to avoid collision.

Currents in Goyomai Kaikyo are extremely unequal, caused by the inequality of the diurnal tides which is especially great; the set and drift vary markedly from day to day.

In the narrows 0.5 mile E of Nosappu Saki, the tidal currents set SE and N at a maximum drift in both directions of 3 knots. On the S side of the channel, 2.5 miles SE of Nosappu Saki, the current sets S from 3 hours after LW to 3 hours after HW, reaching a velocity of 1.5 knots at HW. From 3 hours after HW to 3 hours after LW, it sets N and E with a velocity not exceeding 0.5 knot. The stronger S current is believed to be caused by a strong ocean current flowing S through the narrows. On the N side of the channel, 2 miles N of Nosappu Saki, the current sets E and S from 1 hour after LW to 1 hour after HW. It sets NW from 1 hour after HW to 1 hour after LW. The NW flow reaches a maximum velocity of 1.5 knots, the S flow does not exceed 0.5 knot.

Countercurrents on both sides of the channel produce violent eddies, but they present no danger if the vessel keeps to the deepest part of the channel. On the other hand, the strong ocean currents that occasionally enter the channel can be hazardous.

Suisho Shoto

1.16 Suisho Shoto is a chain of small, low islands extending NE from Nosappu Saki. Though these islands are located S of the main Kuril Islands, they are a part of the Kuril chain.

Suisho To (43°26'N., 145°55'E.), located 4 miles NE of Nosappu Saki, is 9.1 to 18.3m high, and is covered with a thick growth of coarse grass. Above-water rocks fringe the island. A light is situated on the SW extremity of the island and is displayed from a quadrangular structure, 2.4m high. Akiyuri Shima, located 3.5 miles SSE of Suisho To, is a small islet ringed with reefs. Hanare Iwa, the S danger in the group, is a steep-to, above-water rock, that lies 1.25 miles S of Akiyuri Shima. A 3.6m depth is located about 0.5 mile N of Hanare Iwa.

Nokano Se (43°22'N., 145°57'E.), a reef surmounted by drying rocks, lies 2 miles W of Akiyuri Shima. The reef obstructs the S entrance of Suisho Suido.

Yuri Shima (43°25'N., 146°04'E.), 3.25 miles E of Suisho To, has a shoreline of sand and gravel beaches between stretches of steep cliffs. The island rises to a height of 41m in its W extremity. Harukaru Shima is a chain of rocky islets, located 2.8 miles SE of Yuri Shima, that rises to a greatest height of 39m. Foul ground extends up to 0.5 mile from its extremities.

Suisho Suido lies between Suisho To and Yuri Shima. There are irregular depths in the passage and it is not recommended.

Yuri Suido, the passage between Yuri Shima and Akiyuri Shima, is a deep navigable channel with a width of less than 1 mile.

1.17 Shibotsu Shima (43°30'N., 146°08'E.), the largest island in the group, lies 1.3 miles NE of Yuri Shima. The island rises to a height of 30m on the S end and 9m on the N end. A black chimney near Aitomari Saki, the W extremity of the island, is a good landmark. A light, from which a radiobeacon transmits, is situated on the NE extremity of the island. Shibotsu Suido lies between Tomari Saki, the S extremity of Shibotsu Shima, and Yuri Shima. The passage is not navigable.

Taraku Shima (43°38'N., 146°19'E.) lies 6 miles NE of Shibotsu Shima. The island is low and treeless, with sandy beaches between stretches of cliffs.

Taraku Suido, the strait between Shibotsu Shima and Taraku Shima, has a width of 2.5 miles between the 6m lines. Depths in the passage are irregular, and less than 7.6m in places. There is usually a heavy swell in the strait and the tidal currents are strong.

Hira Iso, a steep-to drying rock, usually marked by breakers, lies 2.5 miles SE of the E extremity of Taraku Shima.

Todo Shima (43°34'N., 146°25'E.), a cluster of rocks 41m high, appears as a single islet from a distance. A sunken rock, that does not break unless there is a swell running, lies 1.5 miles SSW of Todo Shima. Kabuto Shima is a group of four steep-to, prominent rocks, up to 42m high, located 1.3 miles ENE of Todo Shima. Kanakuso Iwa, formed by two steep-to isolated rocks 26m high, is located 1.5 miles N of Kabuto Shima.

Caution.—The waters off the Suisho Shoto have irregular depths and are full of detached rocks and reefs.

1.18 Ostrov Shikotan (43°48'N., 146°46'E.), an island separated from the islands of Suisho Shoto by Shikotan Suido, is 14 miles long in a NE to SW direction and is 6 miles wide. Shakotan Yama, 414m high, the highest mountain on the island, rises near the N extremity of the island. From the N the mountain's treeless summit appears rounded, but from NE it is saddle-shaped.

On the S coast of the island there are two bays, Matsugahama Wan and Inemoshiri Wan, that provide anchorage for small vessels; on the N shore there are three bays that will accommodate small vessels. From E to W these bays are Shakotan Ko, Matakoton Ko, and Anama Wan. On the W side of the island, Notoro Ko indents the island, but is so encumbered it is difficult for even small boats to enter.

Pack ice may be encountered around Shikotan To as late as early April, but is rarely seen after mid-April.

Sea fogs in the Shikotan To area are most frequent in June, July, and August. Only rarely during this period is there clear

weather all day, and clear days are normally followed by a siege of dense fog.

The 20m curve lies close inshore, except off the W side of the island, where depths of less than 18.3m extend up to 1 mile offshore. There is a charted shoal patch, whose existence is doubtful, 2 miles NE of Eitannotto Saki (Eitannotto Saki), the E extremity of the island.

Anchorage is available off Shakotan Ko entrance, in 14.6m, sand, good holding ground. The anchorage is open to wind and swell from the W to NE. During January through April, drift ice may render the anchorage untenable.

Shikotan Suido (43°40'N., 146°30'E.) is 12 miles wide with a single obstruction, Amagi Sho, which reduces the E channel to a width of 8 miles, with depths in excess of 26m.

Amagi Sho (43°43'N., 146°24'E.), a rocky area some 3 miles by 2.5 miles in extent, has a least depth of 2.1m.

The irregular tidal currents in Shikotan Suido set S with a rising tide and NE with a falling tide. A N ocean current sets through the middle of the passage, weakening the S and strengthening the N current. Off the SE entrance to the strait, the ocean current deflects the S current SE toward Shikotan To.

Caution.—A Traffic Separation Scheme is located in the strait.

East of Taraku Shima, 3 to 4 miles offshore, tide rips may develop as the N current reaches its maximum strength. When this happens, it is difficult for slow-speed vessels to make way against the current.

Hokkaido—South Coast

1.19 The S coast of Hokkaido extends from Nosappu Saki in a SW direction to Esan Misaki, about 240 miles. The coastline, which is fronted by the North Pacific Ocean, recedes and forms bays on which there are several important ports; among these ports are Akkeshi Ko, Kushiro Ko, Tomakomai Ko, and Muroran Ko.

The 145-mile stretch of coast between Nosappu Saki and Erimo Saki forms the E portion of the Hokkaido S coast. From Nosappu Saki to Shiriha Saki, 53 miles WSW, there are many indentations; detached reefs and islands also abound. Beyond Shiriha Saki, SW to Erimo Saki, the coastline recedes in a shallow curve and is quite free of irregularities.

The coast between Erimo Misaki and Chikui Misaki, 105 miles WNW, recedes toward the N and is quite smooth. The first 30 miles of this coast runs roughly towards the WNW and has a relatively large number of indentations. Four ports, Horoizumi Ko, Samani Ko, Urakawa Ko, and Mitsuishi, lie in this section. The terrain behind the coast consists of high ground and hills rising toward and joining the mountain range in the interior.

From Mitsuishi to Tomakomai, 50 miles farther WNW, the coast has few irregularities and no significant ports or harbors. The first 25 miles of this coast is backed by marine terraces made up of plateaus that have formed at the SW foot of the mountain range inland. Small coastal plains are found only near the mouth of streams entering the sea. Then the coastline consists entirely of sandy beaches, with many marshes in some of the lowlands near the Abira Gawa (Yufutsu Gawa) estuary.

From Tomakomai, the N extremity along this shore, the coast trends 35 miles SW to Chikui Misaki (Tikiu Misaki), the

N entrance point to Uchiura Wan (Utiura Wan). This stretch is almost entirely wave-washed sandy beach, except for two rocky headlands. Streams meander behind the dunes along the shore before emptying into the sea. The land rises to mountains inland that rise to over 1,000m.

Suna Saki, the S entrance point of Uchiura Wan, lies 15 miles SW of Chikiu Misaki. Uchiura Wan, an important bay, extends about 28 miles NW from the entrance.

Esan Misaki lies 29 miles SE of Suna Saki. The intervening coastline is made up almost entirely of volcanic foothills reaching down to the sea; there are two active volcanoes along there.

1.20 Nosappu Saki to Hanasaki Misaki.—The 12-mile coast between these two points is heavily eroded and highly irregular. The terrain inland is flat, with elevations of less than 50m.

Goyomai Saki (43°22'N., 145°49'E.), 1 mile SSW of Nosappu Saki, is a flat, rocky, bare headland, 15m high. From Goyomai Saki the coast trends 7 miles SW to Tomoshiri Saki, then 4 miles farther SW to Hanasaki Misaki.

The 20m curve lies up to 1.5 miles off Goyomai Saki and as little as 0.25 mile off other points. Nekogashira Sho is a large rock, awash, 1 mile SSE of Goyomai Saki. This rock lies near the navigation routes and is extremely dangerous.

Isomoshiri To (43°20'N., 145°47'E.), 2.25 miles SW of Nekogashira Sho, lies on the seaward side of a coastal reef which extends 0.75 mile offshore. A light shown from a white, quadrangular, concrete tower, 10m high, is situated on the W extremity of the island.

Habomai Ko (43°21'N., 145°46'E.) is a coastal port protected by breakwaters and is 2 to 4m deep. The port faces Isomoshiri To and is almost exclusively used by fishing craft of less than 100 grt. A light is shown on the head of each breakwater and from a square concrete tower, 11m high, at Habomai, along with a directional radiobeacon. A light is shown off Onneppu, situated about 3 miles SW of Habomai.

1.21 Tomoshiri To (Tomoshiri Shima) (43°18'N., 145°40'E.), an islet 19m high, is located on a shallow spit that extends 1.25 miles SSW of Tomoshiri Saki.

Tomoshiri Wan is an open bay that lies between Tomoshiri To and Hanasaki Misaki, 3.75 miles SW. The bay affords good shelter against W to N winds, but is exposed to swells in S winds.

When entering and leaving port, care should be taken to avoid the reefs SW of Tomoshiri To and the fish traps that extend 0.6 mile to the SSE from the SW tip of that island between May and November.

Anchorage may be taken in Tomoshiri Wan, in depths of 11 to 13m, sand bottom, on a bearing of 130° to the summit of Tomoshiri To; it is protected against waves from the E to SE.

Tatsumino Se (43°15'N., 145°42'E.), a ridge lying 3.25 miles SSE of Tomoshiri To, is the outermost reef on the coast between Nosappu Saki and Ochiishi Saki and is extremely dangerous. It consists of two reefs separated by fairly deep water; Yuburinami Sho is the NE reef. The reef on the SW side has several rocks, awash, which dries at 0.2m, while the reef on the NE is covered to a minimum depth of 1.9m. Waves constantly break over these reefs; they can be spotted from 3 to 4 miles away. Reportedly the waves breaking over the reefs can

sometimes be detected on radar. A sunken wreck, dangerous to navigation, lies about 1 mile W of Yuburinami Sho. An obstructed fish haven lies about 1.5 miles E of Yuburinami Sho.

Hanasaki Misaki (43°17'N., 145°36'E.), a cliffy headland, is the E entrance point of Hanasaki Byochi. A light is shown from an octagonal concrete tower, 10m high, situated on the point.

1.22 Hanasaki Byochi (43°17'N., 145°35'E.) ([World Port Index No. 61140](#)), situated on the W side of Hanasaki Misaki, is a designated local port. It is the best port on the S coast of Nemuro Hanto; it also serves as the auxiliary port for Nemuro Ko when that port is iced. This port is generally considered to be an ice-free port, but since the harbor was expanded it has been known to freeze. In 1966, the harbor froze from January 18 to March 15. Pack ice appears in the vicinity from late February to late April, and depending on the wind, sometimes immobilizes the entire harbor; most of the time it drifts away in 2 or 3 days. If pack ice penetrates the inner harbor, it is difficult to clear and interferes with the movement of small craft. The pack ice that drifts down in April may be 5 to 6m thick.

South Breakwater extends 0.5 mile W from a point on the shore 0.3 mile NNW of Hanasaki Hana Light. A light is shown on the breakwater head.

West Breakwater projects about 0.2 mile ENE from a position 0.4 mile N of Choboshi Saki.

Another breakwater extends 0.4 mile SSW from the rocks close S of Hanasaki Hana; a light is shown from its S end.

Charted depths alongside the outer face of the berth are from 10 to 10.1m.

Anchorage is available, in 9 to 10.5m, sand, W of Hanasaki Misaki Light. The roadstead is open to the S, and with strong S winds, a swell sets into the anchorage.

A quarantine anchorage is located about 0.5 mile S of Hanasaki Hana Light.

1.23 From Choboshi Saki, the coast trends SSW about 8 miles to Ochiishi Saki. The coast is backed by low land that rises to less than 50m. The headlands are flanked by steep cliffs, and the inlets generally have sand beaches.

A ridge of reefs extend ESE from **Choboshi Saki** (43°16'N., 145°34'E.), and about 0.3 mile out on this ridge is Nakano Se, with a least depth of 4.2m.

Yururi To (Yururi Shima) (43°13'N., 145°36'E.), a cliffy flat-topped island, 43m high, lies 1.5 miles offshore, 3.25 miles SSE of Choboshi Saki. Moyururi To (Moyururi Shima), a similar flat-topped island, 35m high, lies about 0.5 mile NNE of Yururi To. These two islands are surrounded by many rocks and reefs. Todo Shima (Todo Shima), a rock 9m high, surrounded by reefs, lies 0.7 mile NNE of Moyururi To.

Yururi Kaikyo, the strait between the above-described islands and the shore, is a navigable channel about 1 mile wide with water over 5m deep. There are covered rocks and reefs on both sides of the strait and some 6.6 to 8.5m high in the middle of the channel. It is impossible for deep-draft vessels to use this strait, although it is a popular route for most other craft.

A light is shown on the W side of Yururi Kaikyo, 1.75 miles WNW of Yururi Shima Light.

Bokkiriso Wan is a small bay that extends about 1 mile W on the NE side of Ochiishi Hanto, close N of Bokkiriso Saki.

Bokkiriso Ko (43°11'N., 145°31'E.), a boat harbor situated in the SW corner of Bokkiriso Wan, is enclosed by an E and W breakwater. The harbor, whose depth is 4m between the entrance and the wharf, is almost entirely used by the local fishing craft under 100 grt.

Ochiishi Saki (43°09'N., 145°30'E.), the SW extremity of Ochiishi Hanto, is a prominent table-topped headland connected to the mainland by a low neck. Vessels report the 91m radio masts on the cape visible from the ESE up to 22 miles offshore.

1.24 The coast from Ochiishi Saki to Tobutsu Saki, 15 miles WSW, is indented by two large bays and other small bays. The coast consists largely of sand beaches, except near the headlands; the interior is made up of low plateaus. The E half is very rugged with irregular depths. Along the W half of this coast, scattered reefs are found within a mile of the shore.

Kombu Se (43°08'N., 145°26'E.) is an extensive reef stretching W from a position 1.75 miles SW of Ochiishi Saki for a distance of 3 miles. The E part of the reef is always awash; the middle part is marked by drying rocks; the W extremity does not uncover when the sea is calm, and is thus extremely dangerous.

Ushima Saki (43°10'N., 145°30'E.) is a reef-fringed point, 0.5 mile NNW of Ochiishi Saki.

Ochiishi Wan is an open bay entered close N of Ushima Saki. It is fairly shallow, but offers protection from waves produced by N to W winds. There is danger that swells caused by strong S winds may cause the anchor to drag. To obtain maximum shelter, vessels should anchor as close as their draft will permit to the N of Ushima Saki. Anchorage may be taken, in 7.8m, fine sand, with Ushima Saki bearing 190°, 0.4 mile distant.

The water depths between Kombu Se and the shore N are irregular, and there are many covered reefs. Particularly dangerous is a rock that covers 5m, 2 miles W of Ochiishi Saki.

Kombu Se (43°07'N., 145°13'E.), not to be confused with Kombu Se, 10 miles farther E, is a shoal patch that extends 1.25 miles offshore from a position on shore 4 miles NNE of Tobutsu Saki. There is less than 1m depth on the reef. A dangerous rock, with a depth of less than 1.7m, lies 1 mile ENE of Kombu Se.

Hamanaka Wan (43°07'N., 145°10'E.) is enclosed by land on three sides. The entrance, 3.5 miles wide, opens to the E. In addition to Kombu Se, off the N entrance, there are reefs off the S entrance that help to block waves coming in from the E.

The N shore of the bay has many rocks, which are backed by cliffs that give way to low hills. The W shore is mainly sandy beach, backed by marshland, and the S shore is formed by Kiritappu Hanto. Kiritappu Ko is situated near the W end of the S shore. Depths of less than 1m are fouled by seaweed inside the breakwaters.

Oki Se (Okino Se), 3.6m deep, is located 1 mile offshore in the NW part of the bay. Jino Se (Chino Se), to the W of Oki Se, consists of submerged rocks dangerous to navigation.

1.25 Tobutsu Saki (43°04'N., 145°10'E.), the E extremity of Kiritappu Hanto, is 35m high. The point is fronted by shoal water with large boulders that extend about 0.3 mile E. A light is situated on this point.

Kuro Iwa, 5m high, is located 1 mile NE of Tobutsu Saki. The islet lies on the W end of a ridge, which is constantly

awash, and extends about 1 mile E. Hokake Iwa, 13m high, lies on the reef 0.6 mile E of Kuro Iwa.

Anchorage, in depths of 9 to 10m, rock, is available with Kuro Iwa bearing 104°, 1.8 miles distant.

From Tobutsu Saki to Shiriha Saki the coast trends in a SW direction 8 miles to Chirippu Saki, a headland that rises to a height of 55m. The coastal marshland close SW of Tobutsu Saki, rises slowly to plateaus behind Chirippu Saki.

The water depths along this coastal area are varied and there are many rocks and reefs inside the 20m line.

Kemboki Shima (43°03'N., 145°07'E.), a flat-topped 59m high islet, located 3.3 miles SW of Tobutsu Saki, has two conspicuous rocks, 21 and 16m high, located near its SW end.

The channel between Kemboki Shima and Biwase Hana, 0.4 mile W, is suitable only for boats. A light marks the entrance of Biwase Kawa.

Tate Iwa, a yellowish, wall-like rock 38m high, is located on the SW of Chirippu Saki. This rock is conspicuous when viewed from the E or W.

Mabiro Saki (42°59'N., 144°53'E.), at the E entrance of Akkeshi Wan, lies 6.5 miles W of Chirippu Saki. A light is shown at the cape. The coast between these two points is deeply-indented cliffs, formed by wave erosion of the 1,000m high plateau that overlooks the sea. The water is shallow near the entrance to Akkeshi Wan, but elsewhere the 20m curve lies up to 183m or more offshore.

Daikoku Shima, an island with steep cliffs, lies 1.25 miles S of Mabiro Saki. A shoal, with depths of less than 1.5m, extends from Mabiro Saki to Daikoku Shima. Ko Shima, with a height of 32m, is located on the shoal about 0.5 mile S of Mabiro Saki.

A light is shown from a cylindrical concrete structure, 7.6m high, situated on the S extremity of Daikoku Shima.

1.26 Akkeshi Ko (43°02'N., 144°51'E.) ([World Port Index No. 61150](#)) a fishing port, is situated at the NE end of Akkeshi Wan, a circular bay some 6 miles in extent, entered between Daikoku Shima on the E and Shiriha Saki on the W. Foul ground extending E from Shiriha Saki reduces the fairway width in the entrance to 1.5 miles; the channel passes close W of Daikoku Shima.

Winds—Weather.—Prevailing winds at Akkeshi Wan are SE in spring and summer, N in autumn, and E during the winter. The peak fog period is May through August. From late June to late July, fogs may occur that last an entire day.

Fast ice forms along the shores of the bay from February through March, but the middle of the bay is always open. Drift ice and floes may enter the area from February until April; it is usually 1.5m thick and can make navigation difficult.

Tides—Currents.—During the summer off the entrance of Akkeshi Wan, the influence of the ocean current results in a W current with a rate of 1.5 knots. Within the bay, the weak tidal currents set N with a rising tide and S with the falling tide; change occurs around HW and LW.

At the opening into Akkeshi Ko, the flood current sets toward the E and the ebb current toward the W, reversing 1 to 2 hours after HW or LW. The drift here is 3 knots.

Anchorage.—Anchorage is available, in depths of 7.5 to 9.5m, mud, 1 mile WNW of Aikappu Saki. Aikappu Saki is located 1.5 miles SSW of Akkeshi Ko.

1.27 The coast from Shiriha Saki to **Shireto Hana** (42°58'N., 144°22'E.) has a few indentations along the 19 miles of coast at the E entrance to Kushiro Ko. The shoreline extends farthest S near Mataidoki, 13 miles W of Shiriha Saki; then it trends WNW to Shireto Hana. In this area the beaches are mainly sand or shingle and the foreshore is extremely rocky.

The interior consists mostly of plateau-type hills about 100m high that follow the coastline and are higher and steeper in the E, gradually falling off toward the W. Sea eroded cliffs are common, some rising directly from the water. A light stands on the coast 1.5 miles ENE of Mataidoki; it is shown from a square concrete tower, 9.4m high. Another light shown close NE on the coast.

The 20m line lies about 0.2 mile off Shiriha Saki, and about 1.5 miles off Mataidoki. Kushiro Dashi, a shoal patch with a depth of 5.8m, lies close off the foul ground that extends 0.8 mile S of Mataidoki.

Foul ground extends 0.6 mile S of Shireto Hana; even small craft should remain at least 1 mile offshore when in transit along this coast.

Kushiro Ko (42°59'N., 144°22'E.)

World Port Index No. 61160

1.28 Kushiro Ko (Kusiro Ko), at the mouth of the Kushiro Gawa, a port of entry, is the most important port on the SE coast of Hokkaido. It is designated as a specified port. The harbor limit is a line drawn 180° to a point about 0.2 mile S of Shireto Hana Light, then 270° for 3.2 miles, then N to the shore. The port is divided into two separate harbors. The E section is called Kushiro Ko Higashi Ku (Kushiro Ko Higasi Ku); the W is called Kushiro Ko Nishi Ku (Kushiro Ko Nisi Ku). The river, which inundates the plain, now enters the sea 1.5 miles N of Shiro Hana; the old mouth, Kusiro Kawa, emerges within the E section.

Ice.—During severe winters, fast ice may form along the shores of the harbor from mid-December through late March. From early March until late April, drift ice may enter the roadstead. When pack ice appears off the S coast of Hokkaido, special caution is necessary, particularly when entering port at night.

Winds—Weather.—Prevailing winds at Kushiro Ko are NNE in autumn and winter, NE to SE in spring, and SE during the summer.

Fogs occur from June through September, usually with S or NE winds. Heavy fogs tend to form when S winds back to SSE or SE, or when there is a high pressure system off the coast.

Tides—Currents.—At a distance of 2 to 5 miles from shore, S of Kushiro Ko, the flood current sets NNW and the ebb current sets to the SE. Change occurs 1 to 2 hours after HW and LW; rates seldom exceed 0.5 knot.

Depths—Limitations.—The Kushiro Ko approach is free of dangers; the 20m line lies 1 mile off the breakwater entrance and the 10m line reaches the fairway. There are depths alongside the piers of 2 to 10.8m in the E section. The W section has depths alongside the berths that range from 3 to 12m. Inside the breakwater, the depths in the extreme N and E parts of the harbor are less than 5.5m; elsewhere, there are depths from 5.5 to 10.4m. Vessels of 210m length having an 11m draft and 45,000 dwt capacity are the largest vessels accommodated.

Aspect.—The two chimneys at the paper mill, 0.5 mile N of the new entrance of Kushiro Gawa, are conspicuous. The highest of the two is 123m high. The radar station at the SE extremity of Kushiro Ko, near Shireto Hana, is a white structure, and along with the radiobeacon and direction finding station 183m S, are more conspicuous by day than the lighthouse. A number of chimneys and tanks, which are floodlit at night, are situated 5 miles NW of Shireto Hana.

Pilotage.—Harbor Radar Control is operated during periods of poor visibility. Service is available to ships of 500 grt at 20 miles, to small vessels of 50 grt at 10 miles, and to ships of 10 grt at 5 miles.

Pilotage is not compulsory, but it is available for entry during daylight and for departure until 2100; the pilot embarks near the quarantine anchorage, which is charted. A vessel underway in the port will be instructed by the pilot to display certain flags of the International Code indicating the berth to which the vessel is proceeding.

The Quarantine Station operates from daylight until sunset.

Signals.—It is compulsory to fly course indicator signals when underway in this port.

Anchorage.—The best anchorage is found in the E section, with the North Breakwater Light bearing 230°, about 0.3 mile distant, in 10m, mud, good holding ground. With strong S to SW winds, a swell sets into the Inner Harbor; winds from other quarters have little effect. Vessels anchor as convenient in the Outer Harbor during heavy fogs.

The Quarantine Anchorage is in the Outer Harbor. There are designated anchorages for vessels carrying hazardous cargoes.

Caution.—This is the largest base for the northern waters fisheries and is constantly busy with heavy traffic of both large and small vessels; it is particularly congested during the summer fishing season. Marine accidents are not uncommon in this port.

Exploration for gas or oil may be taking place in the SW approaches to Kushiro Ko, within about 6 miles of the port. Exploitation platforms, from which lights are shown and horn fog signals are sounded, may be encountered in this area.

Depths in Section I may be up to 2.6m less than charted.

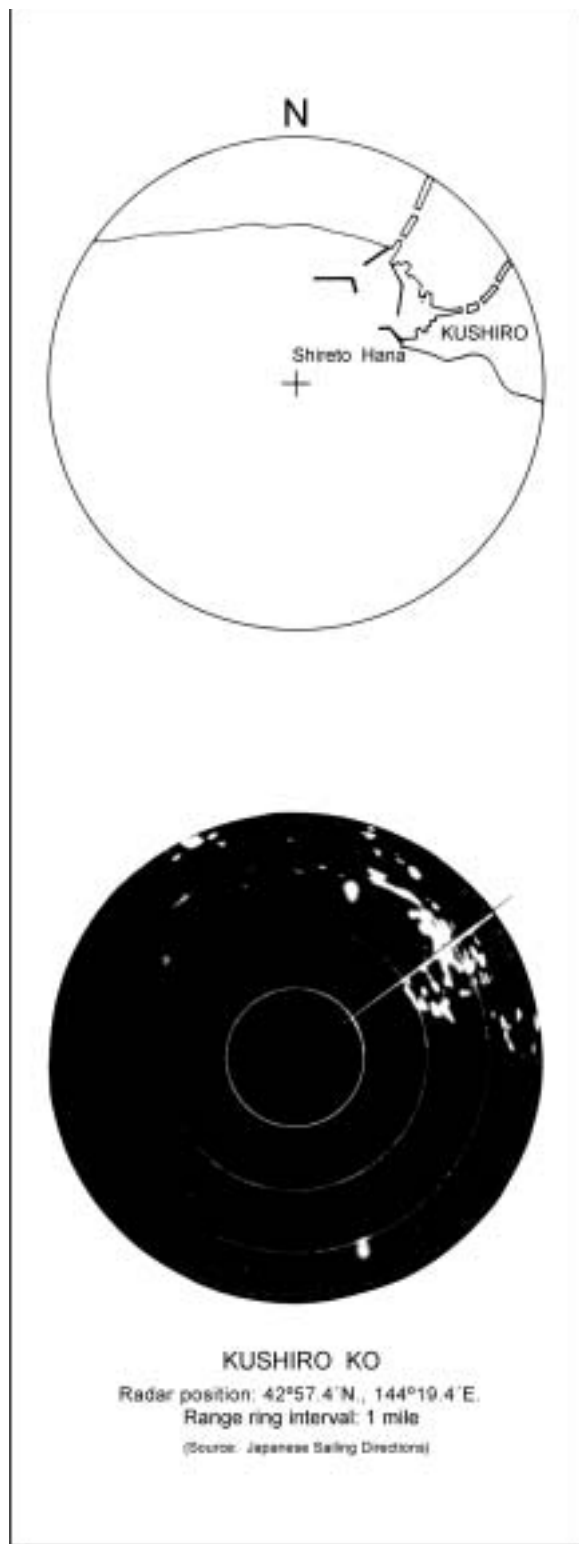
1.29 From Kushiro Ko, the coast trends SSW 65 miles to Tokachi Ko, then 22 miles S to Erimo Saki. The coastline that lies between Kushiro Ko and Tokachi Ko consists of sandy beaches which are backed by high dunes. For 9 miles inland, the terrain is mostly flat hills, which reach a height of about 400m. The currents that enter the sea along here, both large and small, are generally trapped behind the dunes and meander behind them until they eventually find an outlet; lagoons and marshes surround the estuary areas.

Between Kushiro Ko and Tokachi Ko (Tokachi Hiroo), the only ports are small fishing villages.

Between May and November, fish traps may be encountered within 1.5 miles of this coast. A fish haven is situated 4.8 miles ENE of the entrance to Tokachi Ko.

The 40m line lies up to 6 miles off this stretch of coast; there are no charted dangers outside this line.

Oakan Take (Oakan Dake) (43°27'N., 144°10'E.), a cone-shaped peak, 1,371m high, is located 29 miles NNW of Kushiro Ko. Meakan Take (Meakan Dake), with several summits, rises to a height of 1,503m, 8 miles SW of Oakan Take. These peaks are prominent from offshore.



1.30 Tokachi Ko (Hiroo) (42°17'N., 143°20'E.), a small fishing harbor, is a designated important port, and a port to which port regulations apply.

The port, which is protected by breakwaters, lies on the N side of Hiroo Hana. The port has depths of 4.3 to 10.7m alongside the wharves in the N part, where development is taking place; other berths in the S part have depths of about 5.5m.

It is well-protected against W winds, but waves and swells cross over the S breakwater in strong E winds. In bad weather, it is advisable not to try to enter port and, when the situation permits, to seek shelter at another port.

Lights are shown from the breakwaters and a radiobeacon is situated 1.75 miles N of Hiroo Hana. The South and Outer North Breakwater were being extended.

A jetty extends 0.1 mile SE from a position 0.2 mile NNE of the root of New North Breakwater. There are depths from 5.5 to 7.6m alongside the N face of this jetty.

A quay, 240m long, with a depth of 5.5m alongside, extends NNE from the root of the above jetty.

From Tokachi Ko to Erimo Saki, 22 miles S, the mountain range comes down to sea. Hyakunin Hama, the beach area close N of Erimo Saki, is a desert-like expanse of sand about 3 miles long and 0.5 mile wide. The strong winds in this area can whip up severe sandstorms.

1.31 Erimo Saki (41°56'N., 143°15'E.) is a steep, rocky cape at the S end of a large, mountainous, promontory. The cape forms the S extremity of a narrow tableland and is backed by Toyoni Yama (Toyoni Lake), 1,105m high, which rises 9 miles inland. Foul ground and above-water rocks extend 1 mile SE of the cape. It is advisable to keep in water over 37m in depth when rounding the cape.

From Erimo Saki to Chikyu Misaki, the coast recedes in a general N curve to Chikyu Misaki, about 105 miles WNW. The shoreline is broken by several river mouths. In general, the coast is steep-to with no off-lying dangers. The 20m curve lies farthest seaward near the head of the bay.

Erimo Ko (Horoizumi Ko) (42°01'N., 143°09'E.) is a small fishing harbor situated 7 miles NNW of Erimo Saki. Local vessels anchor off the town, in 9.1m, or further out, in a depth of 12.8m, sand. Some shelter is afforded from the N to E winds, but the anchorage is open S and W. Port development was in progress (1980) to provide berths for 1,000 ton ore carriers in a new basin at the N end of the harbor.

Erimo Ko provides shelter during strong winds from between E and N for vessels waiting to round Erimo Saki.

1.32 Samani Ko (42°08'N., 142°55'E.) is a fishing port situated about 12 miles NW of Erimo Ko on the W side of Samani Hana. It is used by ore carriers.

The headland at the S end of Samani Hana, which is 73m high, looks like an island from a distance, but can be recognized from 10 miles away; it is the best radar mark on this coast.

Urakawa Ko (42°10'N., 142°47'E.) lies 7 miles NW of Samani Ko. It is primarily a fishing harbor, but it is also used by lumber and ore carriers.

Aspect.—A radio tower, 0.4 mile NNW of Urakawa Ko Light, marked by obstruction lights, is a useful mark at night only.

Urakawa Ko Light, shown close inland of the S part of the harbor from a square tower, is 12m high. A fog signal is sounded from a position 340m SW of the light.

There are many shallow reefs within 0.3 mile of the shore N of the North Breakwater Light and within 0.2 mile of the shore E of the South Breakwater Light.

A shoal area, with a depth of 0.9m, lies 0.1 mile NW of the head of North Breakwater; the SW side of this area is marked by two special buoys. Water depths on the W side of the breakwater appear to be less than those charted. In 1975, a vessel with a draft of 5m, touched bottom in an area 119m W of the North Breakwater Light, where a depth of 8.6m is charted.

From Urakawa Ko the coast trends about 11 miles NW to Mitsuishi Ko, a small fishing port. Kamoi Take (Kamui Lake), a peak 1,593m high, rises 17 miles NNE of Urakawa Ko. The foreshore between these ports has scattered reefs and rocks.

Caution.—When a typhoon or developed storm system passes near this coast, a powerful wind known as the "Hikada Oroshi" sweeps down the mountain slopes, and the sea surface is assaulted by violent, gusty, NE winds. In September of 1958, a typhoon passed through with a mean maximum wind speed of 55 knots; the absolute maximum on this occasion was 90 knots.

1.33 From Mitsuishi Ko to Mombetsu Hana, about 25 miles NW, the coast is backed by plateaus that have formed at the SW foot of the mountain range that lies inland.

Sasa Yama (42°28'N., 142°31'E.), located 14 miles N of Mitsuishi Ko, rises to a height of 806m. It is easily distinguished as it is covered with bamboo grass instead of the trees found on neighboring peaks. Spring snow melts earliest on this peak. Toriharai Yama, 7.5 miles SW of Sasa Yama, with a height of 390m, is conspicuous when viewed from the S. A brown cliff, 46m high, located on the NW side of an estuary 13 miles NW of Mitsuishi Ko, is conspicuous. A headland, 2.5 miles NW of Mombetsu Hana, is radar conspicuous.

The 25 miles of coastline between Mombetsu Hana and Tomakomai Ko consists entirely of sandy beaches with many marshes in the estuary 5 miles E of Tomakomai Ko.

Many dangerous rocks and reefs, some of which are located just inside the 20m curve, are scattered along the shoreline and should be watched.

Tomakomai Ko (42°38'N., 141°38'E.)

World Port Index No. 61165

1.34 Tomakomai Ko, a port of entry, is Japan's earliest artificial harbor. Breakwaters protect the entrance to the fairway that leads to the Inner Harbor. A power submarine cable follows the inside of the E breakwater. The Inner Harbor, which is comprised of Districts 1 and 2, extends 4 miles ENE from the breakwater entrance. The Outer Harbor is comprised of District 3, the area W of the breakwaters, and District 4, the outer port area E of the breakwaters, including Tomakomai Higashi Ko. The shores of the Inner Harbor are lined with industrial plants.

Winds—Weather.—The weather is relatively mild with a short snow season. Sea fog is common during April and May and most frequent in June and July, occurring normally with SSW winds. Fogs tend to dissipate with the prevailing E wind; the maximum duration is 8 hours. At their densest, visibility may be reduced to 27m; however, visibility averages 0.3 to 0.4 mile.

Tides—Currents.—Currents are seasonal and vary in direction with shifts in the cold and warm ocean currents. From May to October, the prevailing current is E, and from November to April it is W; velocities seldom exceed 0.5 knot.

According to observations, wind wave conditions in the Outer Harbor are generally as follows:

In winter, SSW winds are most frequent and the waves produced by these winds rarely exceed 1m.

From late March to early April, wave heights greater than 3m may occasionally be encountered.

In spring and summer, there are frequent ocean swells from the SSE, ranging from 0.8 to 1.5m, with 10 second periods.

In the fall, an approaching typhoon may produce E and NE winds that may generate wave heights of 2.5m.

Depths—Limitations.—The Tomakomai approach is open and free of dangers. The 10m line reaches to the breakwater entrance and the 20m line lies 0.5 to 0.8 mile farther seaward and parallel to the shoreline. There is an obstruction about 0.9 mile, bearing 238° from the West Breakwater Light.

The channel from the Outer Harbor to the Inner Harbor is about 0.2 mile and 14m deep. The water shoals suddenly outside the channel boundaries, so careful navigation is required.

The depths alongside the wharves of the Inner Harbor range from 5.2 to 14m. The berths are designed to accommodate vessels up to 65,000 dwt.

Idemitsu-Hokkaido Sea Berth lies about 1.5 miles SE of the West Breakwater Light, in a depth of 24m. The berth is comprised of seven dolphins that extend in a NW and SE direction, and is about 503m long. The berth can accommodate vessels up to 280,000 dwt, having a length of up to 350m. A submersible oil boom encircles the berth; the berth is connected to the shore by an underwater pipeline running NNE from the center dolphin. The berth is lighted in the middle and on each side.

Tomakomai Higashi Ko, part of District 4, lies about 8 miles E of Tomakomai Ko. The basin is sheltered by an E breakwater and a large area of reclaimed land on its W side. A detached and lighted breakwater protects a berth for large tankers.

A basin is situated W of the reclaimed land, protected by a breakwater extending 0.5 mile SSW from a position 0.5 mile NNW of the SW corner of the reclaimed land. A light is shown at the head of this breakwater. A detached breakwater extends 0.2 mile SSW from a position 183m W of the head of the above breakwater. Lights are shown from both ends of this breakwater. There is a berth, with depths from 8.8 to 9.7m alongside the SE side of this basin, close N of the SW corner of the reclaimed land.

The tanker berth, surrounded by a submersible oil boom, is approached by a channel dredged at its entrance to 17.5m. The continuation of the channel and the turning area off the berth are dredged to 16m. A branch channel leading to the basin is dredged to 14m.

A bulk cargo wharf, 280m long and within the area dredged to 14m, is situated on the SE side of the reclaimed land.

Leading beacons, in line bearing 059°, lead towards the basin.

Leading beacons, in line bearing 082.75°, lead towards the tanker berth. The approach to the berth is marked by a lighted buoy moored 0.8 mile WNW of the W end of the detached breakwater. Lighted buoys mark the channel and the limits of the turning area



View of Chikyu Misaki from SSE

A submerged wave meter, connected to the detached breakwater by submarine cable, is moored nearly 2 miles S of the breakwater elbow.

Aspect.—A good mark when entering the port are two chimneys situated about 1.5 miles NW of the West Breakwater Light. The W chimney is 206m high. A 161m high, square-shaped chimney stands about 1.3 miles ENE of the root of the East Breakwater. Two 104m high transmitter towers stand on either side of the channel, about 1 mile ENE of the square-shaped chimney.

Tarumae Yama rises to a height of 1,024m, about 11 miles WNW of Tomakomai Ko. The mountain is an active volcano, with a dome-shaped summit rising from the crater; there is a constant emission of white smoke. This peak is conspicuous from a distance.

Pilotage.—Pilotage is not compulsory, but pilots are available from 0430 to 2200 and arrangements for their services may be made through the Tomakomai Pilotage District Pilot Association. Vessels should send a request for pilots 12 hours in advance, stating:

1. Vessel's name.
2. Tonnage.
3. Total length.
4. Draft.
5. Name and address of owner.
6. Speed.
7. Type of cargo.
8. Time pilotage needed.
9. Pilot boarding position, whether or not quarantine is required, and other necessary items.

Any amendments to the pilotage request should be sent 2 hours in advance.

The pilot boards, as follows:

1. Vessels entering Tomakomai Ko Area No. 1, Area No. 2, and Area No. 3:
 - a. 0.5 mile S of Tomakomai Ko East Breakwater.
 - b. When there are numerous vessels at anchor, in an area approximately 1 mile from the above pilot boarding position.
2. Vessels entering Tomakomai Higashi Ko—Within a circle of 1 mile radius centered on position 42°34.1'N, 141°42.1'E, about 3 miles WSW of Tomakomai Higashi Ko Lighted Buoy No. 1.

Signals.—Traffic is regulated by the signals displayed at the signal station on the W side of the entrance, or from the station which is situated 2.25 miles ENE of the first station. Course indicator signal directions are compulsory in this port.

A vessel is required to display the following flags of the International Code to indicate the position of the wharf to which the vessel is proceeding:

Flags Disposed Vertically	Position of Wharf
Second substitute 1S	Section I—S side.
Second substitute 1N	Section I—N side.
Second substitute 2E	Section II—E side.
Second substitute 2N	Section II—N side.
Second substitute 2W	Section II—W side.
Second substitute 2S	Section II—Wharf on W side of approach to basin.

Traffic is regulated by the following signals:

1. One black cone, point up by day, or two white lights over a green light by night—Ships waiting to enter the harbor may now do so; vessels under 500 grt may leave the harbor, but vessels over 500 grt must not move.

2. A square black shape by day, or two white lights over a red light by night—Ships waiting to depart the harbor may now sail; vessels over 500 grt entering the harbor must leave the fairway clear for the outgoing traffic.

3. A black cylinder and a red flag by day or a white light over a red light over a green light by night—All vessels are forbidden to enter or depart from port.

Anchorage.—The port has a sand bottom which provides good holding, but there is no protection from winds coming from any direction. Quarantine anchorage, 5.5 miles in diameter, is situated close W of the entrance. An obstruction lies 0.15 mile NNE of this anchorage.

District 1 of the Inner Harbor and District 4 of the Outer Harbor are designated anchorages for vessels carrying hazardous cargo.

Caution.—A fish haven has been established 3.7 miles SW of Tomakomai Ko, in position 42°35.8'N, 141°32.8'E.

Two wrecks dangerous to navigation lie SW of Tomakomai Ko in position 42°35.0'N, 141°35.5'E.

Less water than charted has been reported (1998) in Section 2 and Section 3, on the W side of the entrance channel.

1.35 Chikyu Misaki (Tikiu Misaki) (42°18'N., 141°00'E.) is a steep, lofty headland on the S side of a peninsula, located about 34 miles SW of Tomakomai Ko. A lighthouse, a direc-

tion finding station, and a fog signal station are situated on the summit of Chikyu Misaki.

The 30-mile stretch from Tomakomai Ko to Washibetsu Saki is almost entirely sandy beach, except for two rocky headlands. The mountains behind the coast reach NE; some of them exceed 1,000m high.

Kuttara Yama (42°30'N., 141°12'E.) is a mountain with two peaks; the highest is 534m. This peak, a good radar mark, is located 21 miles SW of Tomakomai Ko. A mountain rising to a height of 1,040m, 5.75 miles WNW of Kuttara Yama, has a pointed peak that is remarkable when viewed from the S.

Ayoro Bana (42°27'N., 141°12'E.), a tongue-shaped headland, 36m high, is located on the coast 4 miles SSW of Kuttara Yama. The headland is highly visible despite its low profile.

Wasibetu Take (Muroran Take), 911m high, 9 miles W of Ayoro Bana, is easily distinguished as it is the S peak in the area. Washibetsu Saki, 5.5 miles SSE of Wasibetu Take, is a dark, steep-sided headland, 107m high, that is conspicuous from a distance because it stands out from flat surroundings.

The 20m depth contour lies about 1 mile from shore along this coast; the 10m line is less than 0.6 mile from shore. There are virtually no detached reefs.

Caution.—Between April and December, many fish traps are rigged within 2 miles of shore between Tomakomai Ko and Ayoro Bana. Aquaculture farms are situated within 1.5 miles of shore between Tomakomai Ko and Washibetsu Saki.

1.36 Uchiura Wan, a large unencumbered bay, some 26 miles in extent, is entered between Chikyu Misaki on the N and Suna Saki, 16 miles SW. Muroran Ko is situated in the NE section of the bay. From Suna Saki, the coastal shoreline of cliffs and narrow shingle beaches trends SE for 29 miles to Esan Saki.

Etomo Hanto (42°20'N., 140°59'E.) is a hilly, elongated peninsula forming an elbow-shaped projection on the N side of the entrance to Uchiura Wan. Several submarine cables lie between Chikyu Misaki and Suna Saki. Reference should be made to the chart for exact locations. It is joined to the mainland by a low-lying isthmus.

The outer coastline of Etomo Hanto consists primarily of eroded cliffs, 50 to 150m high, with scattered, narrow rock, or sand beaches. Washibetsu Saki, previously described in paragraph 1.35 above, is located at the NE extremity of this peninsula. Itaki Bana, on the E side of the above-mentioned isthmus, is located 1.5 miles SSW of Washibetsu Saki and then 2.5 miles farther to Chikyu Misaki. On the W side of Etomo Hanto is Enrumu Saki (Yenrumu Saki), located 3.75 miles NW of Chikyu Misaki, and 2.25 miles farther NNW is Poroshire Saki (Porosireto Misaki); Muroran Ko is entered between these two points.

Daikoku Shima, 35m high, is located 0.6 mile NNW of Enrumu Saki.

Muroran Ko (42°21'N., 140°58'E.)

World Port Index No. 61170

1.37 Muroran Ko is a port of entry and the principal industrial city of Hokkaido.

This excellent natural harbor is 1 to 2 miles wide and extends 4 miles inward from its mouth. The E side of the harbor is low, flat ground, so a strong W wind can whip up waves even in the inner harbor.

The port area is divided into three port districts, which may be seen on the chart. District 1 and District 2 are generally known as the Inner Harbor; District 3 is generally known as the Outer Harbor. Lights are situated on the head of the N and S, inner and outer breakwaters.

Winds—Weather.—Strong NW winds are frequent in the vicinity of Muroran Ko from mid-September until late March; these winds raise a heavy sea off the harbor, which is open to the W. In September and October, typhoon winds reach their maximum intensity when the typhoon has passed. The record maximum wind speed in this area was 72 knots from the S. There are usually more than 5 days per month between November and February with wind speeds in excess of 29 knots. The district meteorological observatory is situated on the seaward side of Etomo Hanto; the wind data recorded there may differ greatly from the actual wind conditions at Muroran Ko.

Snow occurs from early November until early April; rainfall is heaviest in September and October. Muroran has a mean of 39 days with fog each year. The maximum, 12 days, occurs in July. April, May, June, and August average 6.3 days each. In summer, E winds blowing off the Oyashio Current lower the temperature and are accompanied by fog, which thickens as the wind increases.

Ice.—Ice within the harbor area is rare, allowing the port to be open throughout the year.

Depths—Limitations.—Wharves line the entire shoreline of the Inner Harbor, which is enclosed by a N breakwater and a S breakwater. Other wharves and a sea berth are situated along the N shore of the Outer Harbor, which is protected by the N outer breakwater and the S outer breakwater that extends between Daikoku and Enrumu Saki.

Muroran Ko approach is open and free of dangers. The 20m curve lies close outside the outer breakwaters. The fairway leading into the harbor is dredged to 16.5m, as is the sea berth on the N side of the Outer Harbor. The depths at the principal berths range from 4.5 to 16.5m. There are numerous berths for smaller vessels that range from 1.5 to 5m.

The sea berth in the Outer Harbor will accommodate vessels up to 258,000 dwt, with a maximum length of 321m and a maximum draft of 15m. The largest wharf in the inner harbor will accommodate a vessel of 150,000 dwt, with a draft of 16.5m.

A bridge, with a vertical clearance of 54m, spans the entrance channel in the vicinity of the N breakwater.

Aspect.—The principal landmarks along the shores of the port are:

1. A conspicuous chimney that may be seen 0.65 mile N of the head of the N inner breakwater; its height is 185m.
2. The prominent tower of the oil refinery, about 0.6 mile E of the root of the same breakwater.
3. A wooded hill, 145m high to the tops of the trees, is 0.7 mile S of the root of the inner S breakwater.

Pilotage.—Pilotage is not compulsory, but is recommended for docking and undocking. A 24-hour notice of ETA is required. Harbor pilots are available at the outer anchorage.



Muroran Bridge

Pilots normally embark about 1.5 miles W of Daikoku Shima. As a rule, tankers and large vessels (30,000 dwt) do not enter at night.

Anchorage.—Quarantine anchorage is situated about 1.8 miles WSW of Poroshire Saki. The designated anchorage for vessels carrying hazardous cargo is in the Outer Harbor, District 3. Small vessels may use District 2 during the winter. The bottom is mostly sand, inside and outside the port area, and provides good holding.

Caution.—At times, W and NW winds tend to converge at the harbor mouth and are funneled E through the port with unexpected force. The resulting high waves have been responsible for many anchor dragging and parted mooring lines each year.

During rough weather, the traffic in the bay becomes confused; ships captains unfamiliar with these waters and conditions should contact the harbormaster for guidance. A submarine wave meter and submarine power cable extend 0.15 mile SW of the outer S breakwater head. This cable runs along the breakwater to Daikoku Shima, and from the E side of Daikoku Shima to Enrumu Saki.

At night, the various leading lights and lighted buoys, and the lights on the breakwater, are often difficult to distinguish against lights in the background, and it is reported that the breakwaters are covered at HW. Even in daylight, the large number of vessels in the harbor may make it difficult to see very far ahead.

1.38 Usu Take (42°32'N., 140°50'E.), located on the NE shore of Uchiura Wan, is a conspicuous active volcano with two rounded peaks that rise to a height of 732m, 12.5 miles NNW of Muroran Ko. White vapor rises from the E peak, which is the highest, with the volume increasing before or after a rain.

The 15 miles of coast between Poroshire Saki and Toyoura Byochi consists of mountains either pressing against the water or receding inland.

Arutori Misaki (Esokusoki Saki) (42°30'N., 140°47'E.) projects SW from the shoreline, 9.75 miles NNW of Poroshire Saki. It is 26m high, prominent, and from a distance resembles an island. It is fringed with reefs and should be given a wide berth. Usu Wan, located close N of Arutori Misaki, is encumbered with volcanic rock ejected from Usu Take. This shoal area extends 0.75 mile offshore.

Toyouura Byochi, a small roadstead off the fishing village of Toyoura, 6 miles NNW of Arutori Misaki, affords anchorage, in 7m, sand, good holding ground. The prevailing wind is offshore, but strong S winds are sometimes experienced.

Lights are shown from the breakwaters.

Abuta Byochi, located 2.5 miles SE of Toyoura Byochi, affords good anchorage with protection against E winds, in depths of 12 and 13m. There is good holding ground of sand, mud, and shells. High waves occur when S winds blow. The best berth is with Sankaku Yama, a hill 1 mile E of Poronai Saki, in line with Ganke, a cliff 0.4 mile SSW of Sankaku

Yama, bearing about 020°. Farther E, the anchorage is not good.

1.39 Ikorishireto Saki (42°34'N., 140°35'E.), in the N part of Uchiura Wan, lies 6 miles WSW of Toyoura Byochi. The intervening coast is a series of cliffs and ravines.

The 5-mile stretch between Ikorishireto Saki and Shizukari Byochi, to the WNW, is marked by steep cliffs 100 to 200m high that have been eroded by the sea. Behind the cliffs are thickly-wooded hills, 300m high, that appear black when viewed from a distance. A light is shown from a position 5 miles WNW of Ikorishireto Saki.

The W coast of Uchiura Wan, from Shizukari Byochi S 21 miles to Yurabu Gawa, is a low, flat, crescent of beaches. The mountains inland are not very high. A radio tower, 185m high, is situated close SW of the mouth of Oshamambe Kawa, about 7 miles SW of Shizukari Byochi. The radio tower is a good mark both day and night.

Along this entire coastal stretch, the bottom suddenly shoals about 0.3 mile offshore. There are no detached reefs, but a constant surf makes it difficult even for small boats to land.

Yakumo (42°16'N., 140°17'E.), a small fishing harbor at the mouth of the Yurabu Gawa, has only an E breakwater and no mooring facilities. A light is shown 0.75 mile SSE of the mouth of Yurabu Gawa.

The S shore of Uchiura Wan trends SE 16 miles from Yakumo to Mori Ko. The coastline consists mostly of rocky beaches backed by a few low cliffs; inland is mostly mountainous. From Mori Ko the coast trends 6 miles ENE to Suna Saki. Sawara Wan is formed between Dokui Saki, 2 miles W of Suna Saki, and that point.

Except for Komaga Dake, 5 miles SSW of Suna Saki, good landmarks are few. About 9 miles NW of Mori Ko, there is a cliff, 48m high, that is highly visible from a distance. A light is shown from the vicinity of the village of Otoshibe, situated about 8.5 miles NW of Mori Ko.

1.40 Mori Ko (42°07'N., 140°35'E.) ([World Port Index No. 61180](#)) is an open roadstead protected by breakwaters. The entrance, which is about 69m wide, faces NE. The water depth alongside the piers is 3.5 to 5.5m. The port entrance and inner area are too small to accommodate vessels larger than 1,000 grt. When NW to NE winds are strong, waves may enter the harbor, making it impossible for vessels to remain at their moorings.

Aquaculture installations are situated in Mori Ko. Anchoring is not possible within 1.75 miles of the shore throughout the area.

Weather signals are displayed at night from a tower near the root of the E breakwater.

Sawara Ko (42°08'N., 140°41'E.), a fishing port situated at the head of Sawara Wan, is the best port for vessels under 150 grt in Uchiura Wan.

In winter, strong NW winds may carry waves over the breakwaters, making it impossible for vessels to remain at their moorings.

A light is shown from the head of the North Breakwater.

Anchorage, about 0.5 mile outside the boat harbor, in 10m, mud, provides good protection from E to W winds.

Caution.—Since Suna Saki and Dokui Saki are growing outward, there are shallows near their seaward tips. Five submarine cables extend to Muroran Ko from a point near Suna Saki.

1.41 Suna Saki (42°08'N., 140°43'E.), the S entrance point to Uchiura Wan, is a flat sandy spit which is backed by grassy marshes without trees or houses. A light is situated about 0.2 mile within the point. The lighthouse is a cylindrical concrete tower, 13m high.

Dekima Saki, a rock headland 16m high, backed by a series of low hills which appear as flat land when viewed from a distance, lies 5.5 miles SE of Suna Saki. Matsuya Saki, a headland 32m high, lies about midway between the two above points. Matsuya Saki can be distinguished from Dekima Saki by a background of trees and steeper cliffs at the tip.



E San Light

From Dekima Saki, the coast trends 23 miles farther SE to Esan Misaki. There are several notable features along this coast; within 5.5 miles inland some of the peaks reach a height of over 1,000m. A light is shown on the coast about 1 mile SSE.

Hakamagoshi Dake (41°55'N., 140°49'E.), a conspicuous mountain, 1,107m high, rises 9 miles S of Dekima Saki.

E San (41°48'N., 141°08'E.), an active volcanic mountain 618m high, occasionally has clouds shrouding its peak; it constantly emits sulfurous fumes. The E side of the summit is covered with red rock fragments and the W side has sulfur blotches that look like clouds from a distance. E San rises 1 mile W of Esan Misaki. This volcano, along with the sharp-peaked mountain 690m high that rises 4.25 miles NW, are the primary marks for vessels making for Esan Misaki from the E.

1.42 Osatsube Ko (41°54'N., 141°00'E.), 14 miles SE of Dekima Saki, is a small fishing harbor consisting of a camber protected by breakwaters. A light is shown from the head of the N breakwater. A light is shown about 3 miles E. A light is also shown at the head of the N breakwater at Kakkumi, 1.5 miles WNW.

Benten Shima, 3.5 miles NW of Osatsube Ko, consists of three rocky islets. These islets are 12m high and located on a reef that dries and extends about 0.3 mile offshore. A light is shown here.

Todohokke Ko (41°50'N., 141°09'E.), about 6.5 miles SE of Osatsube Ko, is a small fishing harbor protected by a breakwater. A light is shown on the breakwater head. The harbor can provide shelter on a limited basis for small vessels. Todohokke Wan can provide anchorage for larger vessels.

Esan Misaki (Esan Saki) (41°49'N., 141°11'E.) forms the S point of Todohokke Wan. It is a steep promontory, 260m high, on which there is a lighthouse, a radiobeacon, and a direction finding station. A conspicuous above-water rock, 8.4m high, stands near the S corner of the headland. The lighthouse is a cylindrical concrete tower, 19m high.



Esan Misaki from E

For information on Tsugaru Kaikyo and the W coast of Hokkaido, refer to Pub. 159, *Sailing Directions (Enroute) Japan*, Volume II.